

Public Transport System Can Be More Inclusive for the Blind

Nationwide study by SMU senior lecturer and students shows that 9 in 10 Singaporeans think that the public transport system should be more inclusive and efficient for the legally blind

Singapore, 11 May 2021 – Singapore’s public transport system may be lauded for its efficiency, taking top spot in world rankings, but this efficiency does not apply to a group of users who most need it - the visually impaired and legally blind¹. A study conducted by the [Singapore Management University \(SMU\)](#) also revealed that almost half of the legally blind survey respondents (49%) do not feel they can be open about their visual impairment.

The nationwide study, titled “Guide.Me.” was conducted by SMU Senior Lecturer of Statistics Rosie Ching and her 95 SMU undergraduates. As part of the project, SMU students interviewed 3,733 Singaporeans across all postal codes in Singapore, about their experiences and perceptions of the blind community. Within the backdrop of the ongoing COVID-19 pandemic, Ms. Ching and her students conducted the surveys through face-to-face interviews, phone and Zoom calls.

With the support of [Guide Dogs Singapore](#), the study aimed to examine the perceptions and views of the visually-impaired, their mobility challenges in Singapore, and how far along Singapore is as an inclusive society. In an era where much of learning has gone digital, the nationwide study was part of their introductory Statistics project, infused with elements of the hands-on and experiential [SMU-X](#) pedagogy.

SMU found that almost 8 in ten of the legally blind and more than 9 in ten sighted Singaporeans strongly believe that the Singapore’s public transport system should be more inclusive for them to travel and get around more efficiently. Half of the legally blind also think that the current rate of improvement of transport amenities for them is not good enough for them, with the majority of almost 65% needing a guide or public assistance when travelling and 6 in ten stressing the challenges they face in asking for help in their mobility needs.

When asked to choose the best mobility aid, visually-impaired survey respondents chose “Human guide” as their top choice, followed by “Handphone with GPS or transport app” as a close second choice. The survey results are available at <http://www.screeningstatistics.com/guideme>

Commented Ms. Tan Hwei Lan, Volunteer Director at Guide Dogs Singapore, “These survey results will strengthen our push to encourage more clients, especially our seniors, to learn to use the smartphone and Apps comfortably, because human guides, though much more preferred, may be difficult to find and the person approached (if it is a stranger) may not know how to guide the person with vision impairment properly, a very common phenomenon.”

The Guide.Me. Project had the warm support of its Patron, Ms. Denise Phua, MP and Mayor of Central District CDC, who met Ms. Ching, her students and Guide Dogs Singapore. “The character of a society is reflected in how we treat and include those who are differently abled. Everyone, regardless of ability, deserves equal access to essentials such as education, mobility, healthcare, work and

¹ The legally blind in Singapore are people with vision worse than 20/200. Source: https://www.healthhub.sg/a-z/diseases-and-conditions/58/topics_blindness

friendships. I am heartened that SMU students care enough to study how the quality of life for the visually impaired and legally blind can be enhanced.”

Said Ms. Ching, “A national survey is already challenging in regular times, and how many times more so during this pandemic, with so much of the life we knew irretrievably disrupted. It’s been a privilege for my students and me, to have worked together for the mission of Guide Dogs Singapore, to aid the visually-impaired in helping society understand them more. I have friends who are legally blind, and it is my fervent hope that the fruit of this effort will stimulate everyone to think about our attitudes and perceptions towards them and the everyday challenges they face, to make life easier for them in an already-fraught world.”

Alex Tan Zhong Hao, SMU undergraduate, 24 said, “Guide.Me. has been truly enriching in not only learning statistics, but finding genuine purpose under Ms. Ching’s guidance, to help the visually-impaired and general public to better understand their struggles and needs, to make our community a better place to live for all.”

Survey findings

- a) Close to 8 in 10 (79%) of the legally blind respondents think that Singapore’s transport system needs to be more inclusive for them to travel and get around more efficiently. 92% of the general public agree.
- b) When asked what is the best form of mobility aid (white cane, handphone apps, service dog, or human), “Human guide” was uncovered as a top choice. Most prefer a human guide to a dog or a handphone. The white cane trails dismally in second-to-last place across profiles, superior only to “Others”.
- c) Close to half of the legally blind survey respondents (49%) do not feel they can be open about their visual impairment. The legally blind respondents perceive that others find them less competent than usual because of their condition, and that others feel awkward when they are around them.
- d) The pandemic has shone a spotlight on the loneliness felt by all individuals. Here, the study found that 66% of the legally blind feel lonely more often than usual, due to their blindness.
- e) 45% of the legally blind say they experience a sense of rejection, five times higher than the 9% of the general public who say they reject the blind.
- f) There is empathy for the blind on the part of the general public, with almost 74% of respondents agreeing that persons with such visual impairment may easily feel embarrassed.

Background Information on Guide.Me

In January 2021, SMU students in a unique Statistics module created by [Rosie Ching, Senior Lecturer of Statistics at SMU](#), collaborated with [Guide Dogs Singapore](#) to conduct this nationwide Guide.Me. study. SMU students assimilate statistical concepts and apply them to real-world problems beyond classroom walls. Project Guide.Me. was infused with the University's unique SMU-X pedagogy, which brings the added dimension of real-world experiential learning and impact.

Survey Methodology

Apart from the introduction at the commencement of the project, Ms. Ching invited Guide Dogs Singapore to visit SMU to connect her students more closely with a real guide dog user and his dog. That was when Mr Chia Hong Sen brought Clare, his guide dog, who melted the hearts of everyone present. He also spoke to both SMU staff and students about his experiences as part of the blind community in Singapore and the issues he faces daily. Such examples included how he was often late for appointments because of frequent rejections by hired-car drivers.

Ms. Ching and her 95 students collectively invested more than 3 months of intense work in the study, survey and analysis, gathering data from more than 3,700 interviews in 4 weeks, across four profiles of respondents. The four profiles are:

Profile 1: Those legally blind with no visual perception of light and need mobility aids: 242

Profile 2: Those legally blind with some visual perception of light including hand movement and finger-counting, and need mobility aids: 50

Profile 3: Those not legally blind but need mobility aids: 66

Profile 4: Those who do not belong to the first three categories, i.e. the general public: 3375

Ms. Ching and students collected data via more than 250 variables, evaluating the Visual Stigma Index (VSI) by profile, gender, age, race, education. The thousands of data lines subsequently were put through rigorous analysis over the course of another month. The VSI measures an individual's level of openness towards stigma levels pertaining to blindness and visual impairment on a scale from 0 to 100, with 0 holding the least stigma and 100 having the worst stigma.

Student quotes on Guide.Me.:

Megan THONG Jia Yi, a first-year student from SMU School of Computing and Information Systems:

So many projects end in serious presentations or reports that only regurgitate class content. Our StatX project, however, culminated in a finale that not only showed what we had learnt but also celebrated our experience and personal growth as a result of the project. The project itself was unique as it addressed real-world problems. It allowed us to see where change was most needed and which aspects of the lives of the blind could be improved. The successful execution and completion of this project wouldn't have been possible without Ms. Ching, SMU-X, our patron and partner, and the many new friends I made on this Guide.Me. journey.

Glenyse LIM Rui Qi, a first-year student from SMU School of Social Sciences:

I've also been able to see from a different perspective and better empathize with my friends with visual impairment. I hope that the sharing and results can shine some light on the challenges and stigma that the visually impaired community face and spur us to step forward whenever we see others who need help. Hopefully, together we can create a more inclusive society for everyone.

Jeremy TING Chongkai, a first-year student from SMU Lee Kong Chian School of Business:

I am glad to say I learnt much more from Ms. Ching than just statistics. I look forward to Guide.Me.'s impact if and when our partners do something with the results.

Chloe Teo Si En, second-year student from SMU School of Social Sciences:

Having a father with visual impairment, Guide.Me. and its results will always hold a special place in my heart. STAT-X truly takes learning far beyond the classroom and the knowledge and experience I have gained from this project and class immeasurable. A worthwhile and invaluable journey, what truly sets it apart as unforgettable is having Ms. Ching as our guide the entire way. What I have learnt from this and Ms. Ching will stick with me through life.

Lucas LIM Wei Peng, a first-year student from SMU Lee Kong Chian School of Business:

The past months have been a fruitful journey for me, learning perspectives of the blind that we did not have before. It has been an honour to produce work that could potentially help them. I truly hope that our statistics will make our community more inclusive of them and that any innovations to the white cane will ease their mobility challenges. Learning about the challenges the blind face has shown me that I should not only cherish what I have but also do more and do better for them.

The results we obtained may not mean a lot to the sighted, but to me, if it makes a positive difference in the life of the blind, that is the most fulfilling thing that I could possibly hear.



About Singapore Management University

Established in 2000, Singapore Management University (SMU) is recognised for its disciplinary and multi-disciplinary research that address issues of global relevance, impacting business, government and society. Its distinctive education, incorporating innovative experiential learning, aims to nurture global citizens, entrepreneurs and change agents. With more than 11,000 students, SMU offers bachelors, masters and PhD degree programmes in Accountancy, Business, Economics, Information Systems and Computer Science, Law and Social Sciences, and executive development and continuing education programmes. Through its city campus, SMU focuses on making meaningful impact on Singapore and beyond through its partnerships with industry, policy makers and academic institutions.

www.smu.edu.sg

About SMU-X

SMU-X is an experiential learning framework where students tackle real-world challenges by taking on projects from corporate, non-profit and government-sector organisations. Introduced in 2015 as a university-wide programme, the SMU-X curriculum combines academic with experiential learning through the heavy use of projects from partner organisations.

SMU-X courses challenge students to use their knowledge and skills to recommend solutions through interdisciplinary approaches. Partner organisations and faculty are involved in active mentoring so that students benefit most out of this deep relationship. The result is a tripartite learning loop – students get a better understanding of what it means to use theory learnt outside the classroom; our faculty learn how real-world adapts theories; and our partners deepen their own learning through the findings and recommendations by SMU faculty and students. This inculcates in all parties the value of continuous learning which is imperative given today's rapidly changing economic conditions.

<https://x.smu.edu.sg/>

About Guide Dogs Singapore

Guide Dogs Singapore Ltd. is a social service agency registered with National Council of Social Service and holds the Institute of Public Character (IPC) status. They are an applicant member with the International Guide Dog Federation.

The agency aims to enhance the quality of life of people with vision impairment in Singapore through a range of rehabilitation programmes and the use of guide dogs. Their clients are taught independent mobility and daily living skills by accredited specialists. It is the only agency in Singapore that trains and matches guide dogs with vision impaired people who are keen to transit from the use of white canes to guide dogs.